

JAVA INTERNSHIP

TASK-2

HOSPITAL

MANAGEMENT

SYSTEM

APPOINTMENTSERVLET.JAVA

```
package hms;

import javax.servlet.*;
import javax.servlet.http.*;
import java.io.IOException;
import java.sql.*;

public class AppointmentServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        String patientId =
request.getParameter("patientId");

        String doctor = request.getParameter("doctor");
        String date = request.getParameter("date");
        String time = request.getParameter("time");

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```
        Connection conn =  
DriverManager.getConnection("jdbc:mysql://localhost:  
3306/hms", "root", "root");
```

```
        PreparedStatement ps =  
conn.prepareStatement("INSERT INTO  
appointments(patient_id, doctor, date, time) VALUES  
(?, ?, ?, ?)");
```

```
            ps.setString(1, patientId);
```

```
            ps.setString(2, doctor);
```

```
            ps.setString(3, date);
```

```
            ps.setString(4, time);
```

```
            ps.executeUpdate();
```

```
            conn.close();
```

```
        } catch (Exception e) {
```

```
            e.printStackTrace();
```

```
        }
```

```
        response.sendRedirect("appointment.html");
```

```
    }
```

```
}
```

APPOINTMENT.HTML

```
<!DOCTYPE html>
```

```
<html>
```

```
<head><title>Schedule Appointment</title>
```

```
<link rel="stylesheet" type="text/css" href="style.css">
```

```
</head>
```

```
<body>
```

```
<nav>
```

```
<a
```

```
href="registration.html"><button>Registration</button></a>
```

```
<a
```

```
href="appointment.html"><button>Appointment</button></a>
```

```
<a href="ehr.html"><button>EHR</button></a>
```

```
<a href="billing.html"><button>Billing</button></a>
```

```
<a
```

```
href="inventory.html"><button>Inventory</button></a>
```

```
<a href="staff.html"><button>Staff</button></a>
```

```
</nav>
```

```
<h2>Appointment</h2>
<form action="scheduleAppointment" method="post">
    Patient ID: <input type="text"
name="patientId"><br>
    Doctor Name: <input type="text"
name="doctor"><br>
    Date: <input type="date" name="date"><br>
    Time: <input type="time" name="time"><br>
<input type="submit" value="Schedule">
</form>
</body>
</html>
```

BILLINGSERVLET.JAVA

```
package hms;

import javax.servlet.*;
import javax.servlet.http.*;
import java.io.IOException;
import java.sql.*;
```

```
public class BillingServlet extends HttpServlet {  
    protected void doPost(HttpServletRequest request,  
        HttpServletResponse response)  
        throws ServletException, IOException {  
        String patientId =  
request.getParameter("patientId");  
        String amount = request.getParameter("amount");  
        String service = request.getParameter("service");  
  
        try {  
            Class.forName("com.mysql.cj.jdbc.Driver");  
            Connection conn =  
DriverManager.getConnection("jdbc:mysql://localhost:  
3306/hms", "root", "root");  
            PreparedStatement ps =  
conn.prepareStatement("INSERT INTO  
billing(patient_id, service, amount) VALUES (?, ?, ?)");  
            ps.setString(1, patientId);  
            ps.setString(2, service);  
            ps.setString(3, amount);  
            ps.executeUpdate();  
        }  
    }  
}
```

```
        conn.close();
    } catch (Exception e) {
        e.printStackTrace();
    }
    response.sendRedirect("billing.html");
}
}
```

BILLING.HTML

```
<!DOCTYPE html>
<html>
<head><title>Billing</title>
<link rel="stylesheet" type="text/css" href="style.css">
</head>
<body>
<nav>
<a
href="registration.html"><button>Registration</button
></a>
```

```
<a
href="appointment.html"><button>Appointment</butt
on></a>

<a href="ehr.html"><button>EHR</button></a>
<a href="billing.html"><button>Billing</button></a>

<a
href="inventory.html"><button>Inventory</button></a
>

<a href="staff.html"><button>Staff</button></a>
</nav>
```

```
<h2>Generate Bill</h2>
```

```
<form action="billing" method="post">
```

```
  Patient ID: <input type="text"
name="patientId"><br>
```

```
  Service: <input type="text" name="service"><br>
```

```
  Amount: <input type="text" name="amount"><br>
```

```
<input type="submit" value="Submit">
```

```
</form>
```

```
</body>
```

```
</html>
```


EHRServlet.JAVA

```
package hms;

import javax.servlet.*;
import javax.servlet.http.*;
import java.io.IOException;
import java.sql.*;

public class EHRServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        String patientId =
            request.getParameter("patientId");
        String diagnosis =
            request.getParameter("diagnosis");
        String treatment =
            request.getParameter("treatment");

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```
        Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:
3306/hms", "root", "root");

        PreparedStatement ps =
conn.prepareStatement("INSERT INTO ehr(patient_id,
diagnosis, treatment) VALUES (?, ?, ?)");

        ps.setString(1, patientId);
        ps.setString(2, diagnosis);
        ps.setString(3, treatment);
        ps.executeUpdate();
        conn.close();
    } catch (Exception e) {
        e.printStackTrace();
    }
    response.sendRedirect("ehr.html");
}
}
```

EHR.HTML

```
<!DOCTYPE html>

<html>
```

```
<head><title>Electronic Health Record</title>
<link rel="stylesheet" type="text/css" href="style.css">
</head>
<body>
<nav>
<a
href="registration.html"><button>Registration</button
></a>
<a
href="appointment.html"><button>Appointment</butt
on></a>
<a href="ehr.html"><button>EHR</button></a>
<a href="billing.html"><button>Billing</button></a>
<a
href="inventory.html"><button>Inventory</button></a
>
<a href="staff.html"><button>Staff</button></a>
</nav>

<h2>Enter Health Record</h2>
<form action="ehr" method="post">
```

```
Patient ID: <input type="text"
name="patientId"><br>
Diagnosis: <input type="text"
name="diagnosis"><br>
Treatment: <input type="text"
name="treatment"><br>
<input type="submit" value="Save">
</form>
</body>
</html>
```

INVENTORYSERVLET.JAVA

```
package hms;

import javax.servlet.*;
import javax.servlet.http.*;
import java.io.IOException;
import java.sql.*;

public class InventoryServlet extends HttpServlet {
```

```
protected void doPost(HttpServletRequest request,
HttpServletRequest response)
    throws ServletException, IOException {

    String itemName =
request.getParameter("itemName");

    String quantity =
request.getParameter("quantity");

    try {

        Class.forName("com.mysql.cj.jdbc.Driver");

        Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:
3306/hms", "root", "root");

        PreparedStatement ps =
conn.prepareStatement("INSERT INTO
inventory(item_name, quantity) VALUES (?, ?)");

        ps.setString(1, itemName);

        ps.setString(2, quantity);

        ps.executeUpdate();

        conn.close();

    } catch (Exception e) {

        e.printStackTrace();

    }

}
```

```
    }  
    response.sendRedirect("inventory.html");  
}  
}
```

INVENTORY.HTML

```
<!DOCTYPE html>  
<html>  
<head><title>Inventory</title>  
<link rel="stylesheet" type="text/css" href="style.css">  
</head>  
<body>  
<nav>  
<a  
href="registration.html"><button>Registration</button  
></a>  
<a  
href="appointment.html"><button>Appointment</butt  
on></a>  
<a href="ehr.html"><button>EHR</button></a>  
<a href="billing.html"><button>Billing</button></a>
```

```
<a  
href="inventory.html"><button>Inventory</button></a  
>  
  
<a href="staff.html"><button>Staff</button></a>  
</nav>
```

```
<h2>Inventory</h2>  
  
<form action="inventory" method="post">  
    Item Name: <input type="text"  
name="itemName"><br>  
    Quantity: <input type="text" name="quantity"><br>  
<input type="submit" value="Update">  
</form>  
</body>  
</html>
```

PATIENTREGISTRATIONSERVLET.JAVA

```
package hms;  
  
import javax.servlet.*;  
import javax.servlet.http.*;
```

```
import java.io.IOException;

import java.sql.*;

public class PatientRegistrationServlet extends
HttpServlet {

    protected void doPost(HttpServletRequest request,
HttpServletResponse response)

        throws ServletException, IOException {

        String name = request.getParameter("name");
        String dob = request.getParameter("dob");
        String gender = request.getParameter("gender");
        String contact = request.getParameter("contact");

        try {

            Class.forName("com.mysql.cj.jdbc.Driver");

            Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:
3306/hms", "root", "root");

            PreparedStatement ps =
conn.prepareStatement("INSERT INTO patients(name,
dob, gender, contact) VALUES (?, ?, ?, ?)");

            ps.setString(1, name);
```



```
        ps.setString(2, dob);
        ps.setString(3, gender);
        ps.setString(4, contact);
        ps.executeUpdate();
        conn.close();
    } catch (Exception e) {
        e.printStackTrace();
    }
    response.sendRedirect("registration.html");
}
```

REGISTRATION.HTML

```
<!DOCTYPE html>
<html>
<head><title>Patient Registration</title>
<link rel="stylesheet" type="text/css" href="style.css">
</head>
<body>
<nav>
```

```
<a  
href="registration.html"><button>Registration</button  
></a>
```

```
<a  
href="appointment.html"><button>Appointment</butt  
on></a>
```

```
<a href="ehr.html"><button>EHR</button></a>
```

```
<a href="billing.html"><button>Billing</button></a>
```

```
<a  
href="inventory.html"><button>Inventory</button></a  
>
```

```
<a href="staff.html"><button>Staff</button></a>
```

```
</nav>
```

```
<h2>Register Patient</h2>
```

```
<form action="registerPatient" method="post">
```

```
  Name: <input type="text" name="name"><br>
```

```
  DOB: <input type="date" name="dob"><br>
```

```
  Gender: <select name="gender">
```

```
<option>Male</option><option>Female</option><opti  
on>Other</option>
```

```
</select><br>
```

```
Contact: <input type="text" name="contact"><br>
<input type="submit" value="Register">
</form>
</body>
</html>
```

STAFFMANAGEMENTSERVLET.JAVA

```
package hms;

import javax.servlet.*;
import javax.servlet.http.*;
import java.io.IOException;
import java.sql.*;

public class StaffManagementServlet extends
HttpServlet {

    protected void doPost(HttpServletRequest request,
HttpServletResponse response)

        throws ServletException, IOException {

        String name = request.getParameter("name");
        String role = request.getParameter("role");
```

```
String department =  
request.getParameter("department");  
  
try {  
    Class.forName("com.mysql.cj.jdbc.Driver");  
    Connection conn =  
DriverManager.getConnection("jdbc:mysql://localhost:  
3306/hms", "root", "root");  
    PreparedStatement ps =  
conn.prepareStatement("INSERT INTO staff(name, role,  
department) VALUES (?, ?, ?)");  
    ps.setString(1, name);  
    ps.setString(2, role);  
    ps.setString(3, department);  
    ps.executeUpdate();  
    conn.close();  
} catch (Exception e) {  
    e.printStackTrace();  
}  
response.sendRedirect("staff.html");  
}
```

}

STAFF.HTML

```
<!DOCTYPE html>
```

```
<html>
```

```
<head><title>Staff Management</title>
```

```
<link rel="stylesheet" type="text/css" href="style.css">
```

```
</head>
```

```
<body>
```

```
<nav>
```

```
<a
```

```
href="registration.html"><button>Registration</button></a>
```

```
<a
```

```
href="appointment.html"><button>Appointment</button></a>
```

```
<a href="ehr.html"><button>EHR</button></a>
```

```
<a href="billing.html"><button>Billing</button></a>
```

```
<a
```

```
href="inventory.html"><button>Inventory</button></a></a>
```

```
<a href="staff.html"><button>Staff</button></a>
```

```
</nav>
```

```
<h2>Add Staff</h2>
```

```
<form action="staff" method="post">
```

```
    Name: <input type="text" name="name"><br>
```

```
    Role: <input type="text" name="role"><br>
```

```
    Department: <input type="text"
name="department"><br>
```

```
<input type="submit" value="Add">
```

```
</form>
```

```
</body>
```

```
</html>
```

STYLE.CSS

```
/* General Layout */
```

```
body {
```

```
    font-family: Arial,sans-serif;
```

```
    background-color: #f4f8fb;
```

```
    margin: 0;
```

```
    padding: 0;
```

```
}
```

```
/* Page Heading */
```

```
h2 {
```

```
    background-color: #0066cc;
```

```
    color: white;
```

```
    padding: 15px;
```

```
    margin: 0;
```

```
    text-align: center;
```

```
}
```

```
/* Form Container */
```

```
form {
```

```
    background-color: white;
```

```
    max-width: 600px;
```

```
    margin: 30px auto;
```

```
    padding: 20px;
```

```
    border: 1px solid #ddd;
```

```
    border-radius: 8px;
```

```
    box-shadow: 0 0 10px rgba(0,0,0,0.1);
```

```
}
```

```
/* Input Fields */
```

```
input[type="text"],
```

```
input[type="email"],
```

```
input[type="number"],
```

```
input[type="date"],
```

```
textarea,
```

```
select {
```

```
    width: 100%;
```

```
    padding: 10px;
```

```
    margin: 10px 0 20px 0;
```

```
    border: 1px solid #ccc;
```

```
    border-radius: 4px;
```

```
}
```

```
/* Submit Button */
```

```
button,
```

```
input[type="submit"] {
```

```
    background-color: #007bff;
```



```
color: white;  
padding: 10px16px;  
border: none;  
border-radius: 4px;  
cursor: pointer;  
margin-right: 10px;  
}
```

```
button:hover,  
input[type="submit"]:hover {  
    background-color: #0056b3;  
}
```

```
/* Navigation Bar */  
nav {  
    background-color: #003366;  
    padding: 10px;  
    text-align: center;  
}
```

```
nava {  
    text-decoration: none;  
    margin: 0 10px;  
}
```

```
navbutton {  
    background-color: #005aab;  
    color: white;  
    padding: 8px 12px;  
    border: none;  
    border-radius: 5px;  
}
```

```
navbutton: hover {  
    background-color: #003f7d;  
}
```

```
/* Table Style (optional for EHR or Inventory view) */
```

```
table {  
    border-collapse: collapse;
```

```
width: 100%;  
margin-top: 20px;  
}
```

```
tableth,tabletd {  
    text-align: left;  
    padding: 12px;  
    border-bottom: 1pxsolid#ccc;  
}
```

```
tableth {  
    background-color: #0066cc;  
    color: white;  
}
```

WEB.XML

```
<?xml version="1.0" encoding="UTF-8"?>  
<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"  
  
xmlns:xsi="http://www.w3.org/2001/XMLSchema-  
instance"
```

xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee

http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd"
version="3.1">

<!-- Patient Registration Servlet -->

<servlet>

<servlet-name>PatientRegistrationServlet</servlet-name>

<servlet-class>hms.PatientRegistrationServlet</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>PatientRegistrationServlet</servlet-name>

<url-pattern>/registerPatient</url-pattern>

</servlet-mapping>

<!-- Appointment Servlet -->

<servlet>

```
<servlet-name>AppointmentServlet</servlet-name>  
<servlet-class>hms.AppointmentServlet</servlet-class>  
</servlet>
```

```
<servlet-mapping>  
<servlet-name>AppointmentServlet</servlet-name>  
<url-pattern>/scheduleAppointment</url-pattern>  
</servlet-mapping>
```

```
<!-- EHR Servlet -->
```

```
<servlet>  
<servlet-name>EHRServlet</servlet-name>  
<servlet-class>hms.EHRServlet</servlet-class>  
</servlet>
```

```
<servlet-mapping>  
<servlet-name>EHRServlet</servlet-name>  
<url-pattern>/ehr</url-pattern>  
</servlet-mapping>
```

```
<!-- Billing Servlet -->
```

```
<servlet>
```

```
<servlet-name>BillingServlet</servlet-name>  
<servlet-class>hms.BillingServlet</servlet-class>  
</servlet>
```

```
<servlet-mapping>  
<servlet-name>BillingServlet</servlet-name>  
<url-pattern>/billing</url-pattern>  
</servlet-mapping>
```

```
<!-- Inventory Servlet -->
```

```
<servlet>  
<servlet-name>InventoryServlet</servlet-name>  
<servlet-class>hms.InventoryServlet</servlet-class>  
</servlet>  
<servlet-mapping>  
<servlet-name>InventoryServlet</servlet-name>  
<url-pattern>/inventory</url-pattern>  
</servlet-mapping>
```

```
<!-- Staff Management Servlet -->
```

```
<servlet>
```

```
<servlet-name>StaffManagementServlet</servlet-  
name>  
<servlet-class>hms.StaffManagementServlet</servlet-  
class>  
</servlet>  
<servlet-mapping>  
<servlet-name>StaffManagementServlet</servlet-  
name>  
<url-pattern>/staff</url-pattern>  
</servlet-mapping>  
  
<!-- Welcome File -->  
<welcome-file-list>  
<welcome-file>registration.html</welcome-file>  
</welcome-file-list>  
  
</web-app>
```

CODE FOR DATABASE

```
CREATE DATABASE IF NOT EXISTS hms;
```

USE hms;

-- Patients Table

```
CREATE TABLE IF NOT EXISTS patients (  
    patient_id INT AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(100) NOT NULL,  
    dob DATE,  
    gender VARCHAR(10),  
    contact VARCHAR(15),  
    registration_date TIMESTAMP DEFAULT  
CURRENT_TIMESTAMP  
);
```

-- Appointments Table

```
CREATE TABLE IF NOT EXISTS appointments (  
    appointment_id INT AUTO_INCREMENT PRIMARY  
KEY,  
    patient_id INT,  
    doctor_name VARCHAR(100),  
    appointment_date DATE,  
    appointment_time TIME,
```



```
    FOREIGN KEY (patient_id) REFERENCES  
patients(patient_id)  
);
```

-- EHR (Electronic Health Records)

```
CREATE TABLE IF NOT EXISTS ehr (  
    ehr_id INT AUTO_INCREMENT PRIMARY KEY,  
    patient_id INT,  
    diagnosis TEXT,  
    treatment TEXT,  
    record_date TIMESTAMP DEFAULT  
CURRENT_TIMESTAMP,  
    FOREIGN KEY (patient_id) REFERENCES  
patients(patient_id)  
);
```

-- Billing Table

```
CREATE TABLE IF NOT EXISTS billing (  
    bill_id INT AUTO_INCREMENT PRIMARY KEY,  
    patient_id INT,  
    service VARCHAR(100),
```

```
    amount DECIMAL(10,2),  
    bill_date TIMESTAMP DEFAULT  
CURRENT_TIMESTAMP,  
    FOREIGN KEY (patient_id) REFERENCES  
patients(patient_id)  
);
```

-- Inventory Table

```
CREATE TABLE IF NOT EXISTS inventory (  
    item_id INT AUTO_INCREMENT PRIMARY KEY,  
    item_name VARCHAR(100),  
    quantity INT,  
    updated_at TIMESTAMP DEFAULT  
CURRENT_TIMESTAMP  
);
```

-- Staff Table

```
CREATE TABLE IF NOT EXISTS staff (  
    staff_id INT AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(100),  
    role VARCHAR(50),
```

```
department VARCHAR(100),  
hire_date TIMESTAMP DEFAULT  
CURRENT_TIMESTAMP  
);
```

OUTPUT

REGISTRATION PAGE

The screenshot shows a web browser window with the title "Patient Registration" and the URL "localhost:8080/HospitalMs/registration.html". The browser's address bar shows the URL. The page has a dark blue header with a navigation menu containing "Registration", "Appointment", "EHR", "Billing", "Inventory", and "Staff". Below the header is a blue banner with the text "Register Patient". The main content area is light blue and contains a white registration form. The form has the following fields: "Name:" (text input), "DOB:" (date input with a calendar icon), "Gender:" (dropdown menu with "Male" selected), "Contact:" (text input), and a "Register" button. The Windows taskbar at the bottom shows the date and time as "10:56 AM 18-06-2025" and the weather as "Light rain Today".

Patient Registration

localhost:8080/HospitalMs/registration.html

Registration Appointment EHR Billing Inventory Staff

Register Patient

Name:

DOB:

dd-mm-yyyy

Gender:

Male

Contact:

Register

localhost:8080/HospitalMs/registration.html

Light rain Today

10:56 AM 18-06-2025

APPOINTMENT PAGE

The screenshot shows a web browser window with the title "Schedule Appointment" and the URL "localhost:8080/HospitalMs/appointment.html". The browser's address bar shows the URL. The page has a dark blue header with a navigation menu containing "Registration", "Appointment", "EHR", "Billing", "Inventory", and "Staff". Below the header is a blue banner with the text "Appointment". The main content area is light blue and contains a white appointment form. The form has the following fields: "Patient ID:" (text input), "Doctor Name:" (text input), "Date:" (date input with a calendar icon), "Time:" (time input with a clock icon), and a "Schedule" button. The Windows taskbar at the bottom shows the date and time as "10:57 AM 18-06-2025" and the weather as "Light rain Today".

Schedule Appointment

localhost:8080/HospitalMs/appointment.html

Registration Appointment EHR Billing Inventory Staff

Appointment

Patient ID:

Doctor Name:

Date:

dd-mm-yyyy

Time: --:--:--

Schedule

Light rain Today

10:57 AM 18-06-2025

EHR PAGE

Electronic Health Record

localhost:8080/HospitalMs/ehr.html

Registration Appointment EHR Billing Inventory Staff

Enter Health Record

Patient ID:

Diagnosis:

Treatment:

Save

Light rain Today

Search

ENG IN

10:57 AM 18-06-2025

BILLING PAGE

Billing

localhost:8080/HospitalMs/billing.html

Registration Appointment EHR Billing Inventory Staff

Generate Bill

Patient ID:

Service:

Amount:

Submit

Light rain Today

Search

ENG IN

10:57 AM 18-06-2025

INVENTORY PAGE

The screenshot shows a web browser window with the address bar displaying 'localhost:8080/HospitalMs/inventory.html'. The page has a dark blue header with navigation buttons: 'Registration', 'Appointment', 'EHR', 'Billing', 'Inventory', and 'Staff'. Below the header, a blue banner reads 'Inventory'. The main content area features a light blue background with a white form box. The form contains two input fields: 'Item Name:' and 'Quantity:', each followed by a text input field. Below these fields is a blue 'Update' button. The browser's taskbar at the bottom shows the Windows logo, a search bar, and various application icons. The system tray on the right indicates 'Light rain Today' and the time '10:57 AM 18-06-2025'.

Inventory

Item Name:

Quantity:

Update

STAFF PAGE

The screenshot shows a web browser window with the address bar displaying 'localhost:8080/HospitalMs/staff.html'. The page has a dark blue header with navigation buttons: 'Registration', 'Appointment', 'EHR', 'Billing', 'Inventory', and 'Staff'. Below the header, a blue banner reads 'Add Staff'. The main content area features a light blue background with a white form box. The form contains three input fields: 'Name:', 'Role:', and 'Department:', each followed by a text input field. Below these fields is a blue 'Add' button. The browser's taskbar at the bottom shows the Windows logo, a search bar, and various application icons. The system tray on the right indicates 'Hot days ahead 33°C' and the time '10:57 AM 18-06-2025'.

Staff Management

Add Staff

Name:

Role:

Department:

Add

DATABASE

LET US CONSIDER SOMEONE IS BILLING IN THE BILLING PAGE AND IT IS RECORDED IN THE DATABASE

